UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

C.A. No. : 1:04-CV-12562-WGY

SARAH BORGQUIST as next best friend
of NATHANIEL and ASHER BORGQUIST,
SARAH BORGQUIST and JOHN BORGQUIST,
individually

Plaintiffs,

v.s.

MEDICAL LIABILITY INSURANCE COMPANY

Defendant

PLAINTIFF'S OBJECTION TO DEFENDANT MEDICAL LIABILITY MUTUAL INSURANCE COMPANY'S MOTION TO STAY DISCOVERY

COMES NOW the Plaintiffs in the above referenced and entitled action and objects to the Defendant's motion to stay discovery.

The case sub judice is an action brought pursuant to Massachusetts General Laws Chapter 93 A §9(1)(3) and Chapter 176 D, §3 alleging that the Defendant has acted in bad faith by failing to properly evaluate and effectuate settlement of the underlying medical malpractice matter.

Procedural History

The complaint in the underlying medical malpractice matter was filed on or about July 17, 2002 in the Essex County Superior Court naming as Defendants Stacy L. Veitch, M.D., Deborah A. Bradley, M.D., Associates in Ob/Gyn, Inc. and Essex County Ob/Gyn

Associates, Inc. On May 16, 2003 the Court convened a medical malpractice tribunal hearing, which found in favor of the Plaintiffs.

To date, discovery on the underlying case is complete and the court has scheduled a trial date for June 20, 2005.

In the case sub judice, a letter of demand pursuant to Massachusetts General Laws Chapter 93 A §9(1)(3) and Chapter 176 D, §3 was served on October 20, 2005. The Complaint was filed in the United States District Court on or about December 12, 2004.

Facts

Mrs. Borgquist was an 18 year old gravida I, para I with a twin gestation who was seen by Stacy Veitch, M.D. on or about June 4, 2001. At that time, Dr. Veitch prescribed a seven-day course of Amoxicillin (500 mg. TID) for the treatment of a urine culture, taken on May 25, 2001, which was positive for E. Coli.

The following day, June 5, 2001, Mrs. Borgquist presented to Beverly Hospital for a scheduled ultrasound. Dr. Veitch received a telephone call from the ultrasound technician concerning Mrs. Borgquist, who was then present for the ultrasound. According to Dr. Veitch's entry in Mrs. Borgquist's medical record, Mrs. Borgquist was nauseous and vomiting all day. She vomited two basins of green fluid while in the ultrasound room. In addition, the medical record reveals that Mrs. Borgquist was febrile to 102. 4 and complaining of back pain. Dr. Veitch sent Mrs. Borgquist to the Medical Day Care for intravenous fluids and one dose of Zofran. Mrs. Borgquist was then discharged without receiving intravenous antibiotics.

On June 8, 2001, Mrs. Borgquist presented to Beverly Hospital complaining of vomiting and diarrhea. She was given intravenous hydration per Dr. Veitch's orders, and was also prescribed Tylenol. Mrs. Borgquist was again discharged without receiving intravenous antibiotics.

On June 9, 2001 Mrs. Borgquist again presented to Beverly Hospital. Dr. Bradley saw her with complaints of cramping. She was given one dose of Mefoxin intravenously and discharged.

On or about June 10, 2001, Mrs. Borgquist presented to Beverly hospital in preterm labor complaining of cramps and bleeding. She was found to have urosepsis. Ms. Borgquist was admitted, given one dose of intravenous mefoxin and then transferred to Beth Israel Hospital. Mrs. Borgquist's preterm labor progressed and on June 10, 2001 at twenty-three weeks she delivered her twins vaginally with fetal demise on delivery. The discharge summary prepared by Dr. Bruce Cohen of the Beth Israel Hospital in Boston reads:

> **'It is believed that she had an inadequately treated E Coli infection which proceeded to urosepsis, which caused her to go into preterm labor and deliver at 23 weeks."**

The Deposition of Dr. Bradley was taken on March 24, 2004. Based upon the deposition, the Plaintiffs will move for summary judgment against Dr. Veitch. Dr. Bradley clearly stated that the standard of care for a febrile patient complaining of diarrhea, and vomiting while in the hospital it to admit the patient for a course of IV antibiotics. Dr. Bradley confirmed that if the patient is given oral antibiotics, and is vomiting, the medication would not have an effect. In the case of Sarah Borgquist, on June 5th and again on June 8th, Dr. Veitch certainly should have prescribed IV antibiotics. Had Dr. Veitch done so, Sarah Borgquist would not have gone into pre-term labor, which ultimately caused the death of her twins.

The Autopsy report indicates the presence of e coli bacteria in the lungs of the twins, although the real issue is that the urosepsis caused Mrs. Borgquist to go into active labor, and deliver the twins, before they were able to sustain life outside of the womb. In fact, the autopsy slides and findings are irrelevant. The twins did not die because they were ill, they died because their mother was ill, went untreated by Dr. Vietch and Dr.

Bradley, resulting premature delivery of the infants. Dr. Bradley herself has stated that untreated urosepsis can result in early labor and delivery.

At the medical malpractice tribunal hearing the Plaintiffs presented a letter from James Meserow, M.D. A copy of Dr. Meserow's opinion letter and curriculum vitae is attached hereto as Exhibit "A" and Exhibit "B", respectively. In his letter Dr. Meserow explains Dr. Meserow that Stacy Veitch, M.D. fell below the standard of care in the care and treatment provided to Mrs. Bourquist by failing to appreciate, diagnose and treat pyleonephritis notwithstanding the presence of flank pain, nausea and vomiting and fever. Dr. Meserow opined that appropriate treatment in the form of intravenous antibiotics was not initiated but rather Mrs. Bourquist's asymptomatic E. Coli bacteriuria was initially treated with medication, which was resistant to ampicillin. According to Dr. Meserow, as a result of the Dr. Veitch's failure to appropriately treat Mrs. Bourquist the infection progressed to pyleonephritis and urosepsis causing preterm labor and fetal demise.

It is the opinion of Dr. Meserow that Deborah Bradley, M.D. fell below the standard of care in her care and treatment of Mrs. Bourquist. Dr. Bradley, too, failed to appreciate diagnose and appropriately treat Mrs. Bourquist despite a known history of a recent E. Coli bacteriuria, flank pain, nausea and vomiting.

Dr. Meserow's opinion of the care conforms exactly with the opinion of Dr. Cohen, the treating physician from the Beth Israel Deaconess Hospital that states 'It is believed that she had an inadequately treated E Coli infection which proceeded to urosepsis which caused her to go into preterm labor and deliver at 23 weeks."

Argument

Based upon the facts of the case and the behavior of the Defendant, the Court should not order a stay of discovery in the case.

Following the medical malpractice tribunal hearing, Plaintiffs' Counsel completed discovery. In an effort to be thorough, Plaintiffs counsel also reviewed the applicable medical literature concerning the treatment of urinary tract infections such as that Ms. Borgquist was suffering from. Several respected medical text in the area of obstetrics/gynecology were consulted including:

-Medicine of the Mother & Fetus, Edited by Reece
-Maternal-Fetal Medicine, Creasy & Resnick
-Obstetrics and Gynecology/Principles for Practice/Ling & Duff
-Williams Obstetrics, Cunningham, et. Al.

All of the medical text referenced support the Plaintiffs medical position in the case sub judice. A copy of the applicable section of Williams Obstetrics is attached hereto as Exhibit "B". The Williams text citing a 1998 medical journal article from American Journal of Obstetrics/Gynecology by Wing. M.D. titled" A Randomized Trial of Three Antibiotic Regimens for the Treatment of Pyelonephritis in Pregnancy" noted that outpatient management of pregnant women with pyelonephritis is applicable to very few women, as for various reasons most women were unable to adhere to the treatment regimen. In the Borgquist case, Sarah Borgquist was unable to follow the outpatient treatment regimen as she was vomiting up the medicine and not gaining any benefit.

Based upon the opinion of Dr, Meserow and the medical literature, on July 20, 2004 a letter of demand was sent to the insurer for the defendants Medical Liability Insurance Company. A copy of the letter is attached hereto as exhibit "D". It was of some concern that MLIC was the insurer as the last case Plaintiffs' counsel had with the company settled only after the filing a bad faith action in this very court. See Wetmore v. MLMIC, filed December 4, 2003.

On July 27, 2004 Joshua Formica of MLMC responded to the demand letter stating that the insurance company was evaluating it's position and would be in contact with Plaintiffs' Counsel. Exhibit "E". On July 28th Plaintiffs' Counsel responded with an

agreement to delay the 93A filing, and the filing of a motion for summary judgment, until the insurers evaluation was complete. Exhibit "F".

By the beginning of September, the insurer had not provided the status of its review and on September 8, 2004, Plaintiffs' Counsel wrote to Mr. Formica requesting information. Exhibit "G". When no response to the September 8th letter was received, anther letter was sent on October 12th, referencing bad faith. Exhibit "H". On October 19th the insurer responded and stated that there was a favorable medical review for the defense. and that the pathological review was still not complete. Exhibit "I". In the October 19th letter, Mr. Formica attempted to blame the delay on the Plaintiffs' failure to produce pathology slides despite the fact that the slides were produced to the defendant's counsel months earlier. Despite the claim that there was a favorable defense review, no information about the alleged medical expert, or the basis of the defense was offered.

Frustrated by the continued delays and lack of meaningful information, on October 20, 2004, Plaintiffs Counsel did send the insurer a formal letter pursuant to Massachusetts General Laws Chapter 93 A §9(1)(3) and Chapter 176 D, §3. Exhibit "J". Pursuant to Massachusetts General Laws, a response to the Chapter 93 A §9(1)(3) and Chapter 176 D, §3 demand letter was due within 30 days.

As a response letter from the insurer was not received within 21 days, on November 21st, Plaintiffs' Counsel wrote again to the insurer informing them that a Complaint in the 93 action would be filed in the United States District Court on November 21, 2004. Exhibit " K". The November 11th letter again quoted the discharge summary from Bruce Cohen at the Beth Israel Deaconess Hospital that states:

> **'It is believed that she had an inadequately treated E Coli infection which proceeded to urosepsis, which caused her to go into preterm labor and deliver at 23 weeks."**

On November 20th, just one day before the insurers response to the 93A letter was

due, Plaintiffs' Counsel received a supplemental interrogatory answer with information concerning the defendant's expert. Exhibit "L". While in most cases supplying expert information would be the end to the 93A action, this is not the case in this instance. First, the defense expert, Thomas Halpin, M.D. is well known the Plaintiffs' bar. Dr. Halpin is a frequent defense expert who has to Counsel's knowledge never acted on behalf of a Plaintiff in a medical malpractice action.

Of more concern though is that while the interrogatory claims to be the opinion of Dr. Halpin, it was clearly written by the defendant, Dr. Veitch. The interrogatory answer refers on at least one occasion to "we recommended" and "my nurse'. Certainly it must be asked if in fact these are the opinions of Dr. Halpin or did he simply agree to put his name on information supplied by the defendant. It would be interesting to ask Dr. Halpin under oath when he received the medical records, if he wrote a letter to the defense counsel and just how the interrogatory answer was formulated. Further, what role did the defense counsel Jennifer Herlihy play in formulating an interrogatory, which purport to be the fair and proper opinions of an expert when clearly the opinions are those of the defendant physician.

Of course, as it is clear that Dr. Halpin simply affixed his name to an interrogatory answer prepared by Dr. Veitch, it would explain the medical inconsistencies in the letter and the many places where the letter is simply factually and medically incorrect. For example, in an effort to deflect from the failure of Dr. Veitch to appreciate that the treatment for the urinary tract infection was not being treated because Sarah Borgquist was unable to keep down the pills, the interrogatory refers to a differential diagnosis of gastroenteritis, which does not appear anywhere in the medical records, and ignores the diagnosis of a urinary tract infection which is stated in the medical records. The interrogatory answer actually includes the following completely incorrect statement:

" There was no reason, except in retrospect, to suspect that she had a urinary tract infection"

This statement is supposedly the expected testimony of Dr. Halpin (actually written by Dr. Veitch), despite the fact that the medical records indicate that a urinary tract infection was diagnosed by laboratory tests on May 25th and that the treatment Ms. Borgquist was received was for the urinary tract infection.

The defendant insurer is of the opinion that merely supplying a letter from an expert, even if the opinions are not actually those of the expert, and despite the letter being medically and factually incorrect removes the specter of bad faith. The Plaintiffs disagree and argue that rather than remove the bad faith, the actions of the insurer and the defendants in producing such a questionable interrogatory answer confirms the bad faith. It is fair to have defendant prepare an interrogatory answer and then suggest that in fact it contains the opinions of another. It is not only unfair, it is improper.

In an effort to insure that the Plaintiff was correct in their view of the case, Plaintiffs Counsel consulted with two additional medical experts concerning the case. The first additional expert, Dr. John D'Orio, is a Clinical Professor of Medicine at the Brown University Medical School, attending physician at the Women & Infants Hospital, the Brown University Medical School teaching hospital. Dr. D'Orio agrees with the view of Dr. Meserow, and the discharge summary of Dr Cohen that in light of Ms. Borgquist' vomiting and illness she required IV antibiotics for her diagnosed UTI, and that as Dr. Cohen wrote an inadequately treated E Coli infection proceeded to urosepsis which caused her to go into preterm labor and deliver the twins at 23 weeks.

The Plaintiffs have also retained Frank J. Manning, Chairman of the Department of Obstetrics/ Gynecology at the New York University Medical Center as a medical expert. Dr. Manning's opinion is the same as that of Dr. Meserow and Dr. D'Orio. Prior to joining New York University Medical Center, Dr. Manning was the co-director of the Department of Maternal-Fetal Medicine at Albert Einstein Medical Center, the Director of Maternal-Fetal Medicine and Clinical Obstetrics at Columbia Presbyterian Medical Center, a professor at the Columbia University Medical School and the Virgil Damon Professor of Fetal Medicine (endowed chair) at Columbia University Medical School.

Dr. Manning is on the editorial review board of numerous medical journals including the Journal of Maternal Fetal Medicine and the American Journal of Obstetrics and Gynecology. Dr. Manning's curriculum vitae includes more than 30 pages of publications including book chapters in numerous ob/gyn texts such as Medicine of the Mother & Fetus, Edited by Reece and Maternal-Fetal Medicine, Creasy & Resnick. Dr. Manning is well known for the development of the biophysical profile, a test now considered a standard test during pregnancy and used by every ob/gyn in the country, and for his own texts including "Fetal Medicine-Principles and Practice".

Again it is the opinion of Dr. manning that the standard of care was clearly violated by the failure to administer IV antibiotics in light of Ms. Borgquist' diagnosed UTI and vomiting.

Despite the "interrogatory" answer provided by the defendant, liability is clear in this case. Rather than excuse bad faith, the interrogatory confirms it. The court should deny the Defendants request for a stay and should in fact explore the genesis of the interrogatory answer and the role of Dr. Veitch's counsel in presenting Dr. Halpin's "expert opinion".

The Plaintiffs,
By their Attorneys,

/s/ Kenneth M. Levine

_____
Kenneth M. Levine, BBO# 296850
KENNETH M. LEVINE & ASSOCIATES
370 Washington Street
Brookline, MA 02445
617-566-2700

Dated : April 4, 2005

To Whom it May Concern:

I have reviewed the records from Beverly Hospital, Children's Hospital Department of Pathology (autopsy), Beth Israel Deaconness Hospital and Essex OB-GYN pertaining to the care and treatment of Sarah Borgquist.

In brief summation, Mrs. Borgquist was an 18 year old gravida I, para I with a twin gestation who was seen by Stacy Veitch, M.D. on or about June 4, 2001. At that time, Dr. Veitch prescribed a seven day course of Amoxicillin (500 mg. TID) for the treatment of a urine culture, taken on May 25, 2001, which was positive for E. Coli.

The following day, June 5, 2001, Mrs. Borgquist presented to Beverly Hospital for a scheduled ultrasound. Dr. Veitch received a telephone call from the ultrasound technician concerning Mrs. Borgquist, who was then present for the ultrasound. According to Dr. Veitch's entry in Mrs. Borgquist's medical record, Mrs. Borgquist was nauseous and vomiting all day. She vomited two basins of green fluid while in the ultrasound room. In addition, the medical record reveals that Mrs. Borgquist was febrile to 102. 4 and complaining of back pain. Dr. Veitch sent Mrs. Borgquist to the Medical Day Care for intravenous fluids and one dose of Zofran. Mrs. Borgquist was then discharged without receiving intravenous antibiotics.

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On June 9, 2001 Mrs. Borgquist again presented to Beverly Hospital. She was seen by Dr. Bradley with complaints of cramping. She was given one dose of Mefoxin intravenously and discharged.

On or about June 10, 2001, Mrs. Borgquist presented to Beverly hospital in preterm labor complaining of cramps and bleeding. She was found to have urosepsis. Ms. Borgquist was admitted, given one dose of intravenous mefoxin and then transferred to Beth Israel Hospital. Mrs. Borgquist's preterm labor progressed and on June 10, 2001 at twenty-three weeks she delivered her twins vaginally with fetal demise on delivery.

It is my opinion, that Dr. Veitch fell below the standard of care in her care and treatment of Mrs. Borgquist. Dr. Veitch failed to appreciate, diagnose and appropriately treat pyelonephritis in Mrs. Borgquist given her symptoms which included flank pain, nausea and vomiting with fever, all in the face of a known E. Coli asymptomatic bacteriuria that was resistant to ampicillin. Dr. Veitch failed to timely admit Mrs. Borgquist and failed to administer appropriate intravenous antibiotics for the E. Coli pyleonephritis. It is my opinion, to a reasonable degree of medical certainty, that had Dr. Veitch appropriately treated Mrs. Bourguist's E. Coli asymptomatic bacteriuria with oral antibiotics to which the E. Coli was sensitive, more likely than not, it would not have progressed to pyelonephritis and urosepsis causing preterm labor and fetal demise.

It is my opinion that Dr. Bradley fell below the standard of care in her care and treatment of Ms. Borgquist. Dr. Bradley failed to appreciate, diagnose and appropriately treat Mrs. Borgquist given her known history of a recent E. Coli asymptomatic bacteriuria coupled with her very recent history of fever, flank pain, nausea and vomiting. It is my opinion to a reasonable degree of medical certainty that had Dr. Bradley appropriately diagnosed and treated Mrs. Borgquist's E. Coli asymptomatic bacteriuria with adequate intravenous coverage it would not have proceeded to pyelonephritis and urosepsis causing preterm labor and fetal demise.

James G Meserow MD

James Meserow, M.D.

James Albert Meserow, M.D., F.A.C.O.G., F.A.C.S.

COOK COUNTY HOSPITAL
Division of Maternal-Fetal Medicine
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Chicago, Illinois 60612
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CURRICULUM VITAE

CURRENT APPOINTMENTS

Attending Physician, 1999 to Present
Department of Obstetrics and Gynecology
Division of Maternal-Fetal Medicine
COOK COUNTY HOSPITAL
Chicago, Illinois

Consultant in Maternal-Fetal Medicine and Director of High Risk Obstetrics Clinic, 1999 to Present
ST. ANTHONY HOSPITAL
Chicago, Illinois

Assistant Professor, 1988 to Present
Department of Obstetrics and Gynecology
Division of Maternal-Fetal Medicine
RUSH MEDICAL COLLEGE
RUSH-PRESBYTERIAN-ST.LUKE'S MEDICAL CENTER, Chicago, Illinois

PREVIOUS APPOINTMENTS

Director of Critical Care Obstetrics, 1996 to 1999
Director of Maternal-Fetal Medicine, 1998 to 1999
Division of Maternal-Fetal Medicine
CENTER FOR HUMAN REPRODUCTION,
Chicago, Illinois

Director of Maternal-Fetal Medicine, 1988 to 1996
RUSH PRUDENTIAL HEALTH PLAN
RUSH-PRESBYTERIAN-ST.LUKE'S MEDICAL CENTER, Chicago, Illinois

Director of Maternal-Fetal Medicine, 1990 to 1995
Department of Obstetrics and Gynecology
ST. JOSEPH HOSPITAL, Chicago, Illinois

EDUCATION

Doctor of Medicine, 1978
RUSH MEDICAL COLLEGE, Chicago, Illinois

Doctoral Program Graduate Student, 1975 to 1976
Graduate School of Medicine Sciences
CORNELL UNIVERSITY &
Sloan-Kettering Institute for Cancer Research
ROCKEFELLER UNIVERSITY
New York, New York

Bachelor of Arts in Biochemistry, 1969 to 1973
PRINCETON UNIVERSITY
Princeton, New Jersey

PHILLIPS EXETER ACADEMY, 1966 to 1969
Exeter, New Hampshire

MEDICAL TRAINING

Residency in Obstetrics and Gynecology, 1980 to 1983, RUSH-PRESBYTERIAN-ST.LUKE'S MEDICAL CENTER, Chicago, Illinois

Internship in Obstetrics and Gynecology, 1979 to 1980, NORTHWESTERN UNIVERSITY MEDICAL CENTER, Chicago, Illinois

Rotating Internship, 1978 to 1979
LOS ANGELES COUNTY-UNIVERSITY OF SOUTHERN CALIFORNIA MEDICAL CENTER,
Los Angeles, California

FELLOWSHIPS

Maternal-Fetal Medicine Fellowship, 1985 to 1987
UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE, Chicago, Illinois

Critical Care Medicine Fellowship, 1983 to 1984
UNIVERSITY HEALTH CENTER OF PITTSBURGH, Pittsburgh, Pennsylvania

Predoctoral Research Fellowship, 1975 to 1976
SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH, New York, New York

BOARD CERTIFICATIONS

Certified in Obstetrics and Gynecology, December 1989, AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY Recertified February 2001

Certified in Maternal-Fetal Medicine, April 1998, AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY, Division of Maternal-Fetal Medicine Recertified February 2001

Certified in Utilization Review and Quality Assurance, 1994
AMERICAN BOARD OF UTILIZATION REVIEW AND QUALITY ASSURANCE

National Board of Medical Examiners - Certificate Number: 207234, Part I, September 1976; Part II, April 1979; Part III, March 1978

CONTINUING EDUCATION

Preconceptual Counselling, 2002
Chicago, Illinois

Medical Complications of Pregnancy, 2001
London, England

3D Ultrasound Seminar, 2000
Chicago, Illinois

Review of Fetal Anomalies, 2000
Ultrasound Course
Chicago, Illinois

Fetal Echocardiography Preceptorship, 1999
CHRIST HOSPITAL,
Chicago, Illinois

Symposium on Prevention of Preterm Delivery, 1995
RUSH MEDICAL COLLEGE, Chicago, Illinois

March of Dimes Symposium on Advances in Genetics, 1995, Palm Beach, Florida

Certification Examination Course, 1994
AMERICAN BOARD OF UTILIZATION REVIEW AND QUALITY ASSURANCE

Illinois State Medical Society Risk Management Seminars, 1994 & 1996
ST. JOSEPH HEALTH CENTERS AND HOSPITAL, Chicago, Illinois

TEACHING APPOINTMENTS

Assistant Professor, 1988 to Present
Department of Obstetrics and Gynecology
RUSH MEDICAL COLLEGE
RUSH-PRESBYTERIAN-ST.LUKE'S MEDICAL CENTER, Chicago, Illinois

Director of Maternal-Fetal Medicine
Department of Obstetrics and Gynecology, 1990 to 1995, ST. JOSEPH HEALTH CENTERS AND HOSPITAL, Chicago, Illinois

Director
Senior Medical Student Clerkship in Advanced Obstetrics, 1989 to Present
RUSH MEDICAL COLLEGE
Chicago, Illinois

Certified Instructor, 1989
Advanced Cardiac Life Support
AMERICAN HEART ASSOCIATION

Assistant Professor, 1987 to 1988
Department of Obstetrics and Gynecology
Division of Maternal-Fetal Medicine
MOUNT SINAI HOSPITAL
MOUNT SINAI SCHOOL OF MEDICINE
New York, New York

Instructor, 1985 to 1987
Department of Obstetrics and Gynecology
UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE
Chicago, Illinois

Assistant Professor, 1984 to 1985
Department of Obstetrics and Gynecology
UNIVERSITY OF KANSAS MEDICAL CENTER,
Kansas, City, Kansas

Instructor, 1982 to 1983
Department of Obstetrics and Gynecology
RUSH MEDICAL COLLEGE
Chicago, Illinois

HOSPITAL STAFF APPOINTMENTS

Attending Physician, Departments of Obstetrics and Gynecology
St. Anthony Hospital, 1999 to Present
Cook County Hospital, 1999 to Present
Rush-Presbyterian-St. Luke's Medical Center, 1988 to Present
Michael Reese Hospital, 1996 to Present
St. Alexius Medical Center, 1996 to Present
Weiss Memorial Hospital, 1996 to Present
St. Joseph Hospital, 1990 to Present
Grant Hospital, 1989 to Present

HOSPITAL COMMITTEES

Member,
Nutrition Committee, 2000 to Present
COOK COUNTY HOSPITAL
Chicago, Illinois

Alternate Member,
Oversight Committee
Department of Obstetrics and Gynecology, 1999 to Present
COOK COUNTY HOSPITAL
Chicago, Illinois

Member,
Committee on Academic Freedom, 1995 to 1998
RUSH MEDICAL COLLEGE
Chicago, Illinois

Member Credentials and Promotions Committee
Department of Obstetrics and Gynecology, 1995 to 1999, RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER
Chicago, Illinois

Member,
Utilization Review Committee, 1995 to 1998
RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER
Chicago, Illinois

Member
Blood Transfusion Review Committee
Infection control Committee
Risk Management Committee
Surgical Tissue Review Committee, 1991 to 1995
ST. JOSEPH HEALTH CENTERS AND HOSPITAL
Chicago, Illinois

Member
Blood Transfusion Review Committee, 1994 to 1995
Surgical Tissue Review Committee, 1992 to 1994
RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER
Chicago, Illinois

Member
Committee on Student Evaluation and Promotion, 1989 to 1992, RUSH MEDICAL COLLEGE, Chicago, Illinois

QUALITY ASSURANCE POSITIONS

Member
State of Illinois,
Maternal Mortality Committee 2001 to Present

Physician Consultant
Quality Assurance in Obstetrics-Gynecology, 1986 to 1990, CRESCENT COUNTIES MEDICAL FOUNDATION, Chicago, Illinois

Physician Consultant
Quality Assurance in Obstetrics-Gynecology, 1990 to Present, CENTRAL ILLINOIS MEDICAL REVIEW ORGANIZATION, Chicago, Illinois

Physician Consultant
Quality Assurance in Obstetrics-Gynecology, 1990 to Present, STATE OF ILLINOIS & ILLINOIS DEPARTMENT OF PUBLIC AID

Director of Quality Assurance
Department of Obstetrics-Gynecology, 1992 to 1995, ST. JOSEPH HEALTH CENTERS AND HOSPITAL, Chicago, Illinois

Member
Quality Assurance Committee
Department of Obstetrics and Gynecology, 1995 to Present, RUSH MEDICAL COLLEGE AND RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER, Chicago, Illinois

PUBLICATIONS

James Meserow, M.D., Joseph Kraft, M.D., *et al*, **Maternal Insulin Levels During 3 Hour Glucose Tolerance Testing: Correlation with Maternal and Neonatal Outcome**, Revised and Submitted for Publication

Volgman, A., Meserow, J. & Parillo, J., **Should Pregnant Patients with Cardiac Arrhythmias be Treated with Magnesium?** *Annals of Internal Medicine*, Submitted for Publication

ABSTRACTS

James Meserow, M.D., Joseph Kraft, M.D., *et al*, **Maternal Insulin Levels During 3 Hour Glucose Tolerance Testing: Correlation with Maternal and Neonatal Outcome**
Abstract Accepted for Presentation at the Fourth International Symposium on Gestational Diabetes, March 1997
Chicago, Illinois

INVITATIONAL LECTURES

"Critical Care Obstetrics," Department of Cardiology, Rush-Presbyterian-St. Luke's Medical Center, Chicago, Illinois, January 1996

"Antepartum Management of Patients with Risk Factors for Preterm Delivery," Symposiumon Prevention of Preterm Delivery, Rush-Presbyterian-St. Luke's Medical Center, Chicago, Illinois, June 1995

"Diabetes and Pregnancy," Grand Rounds, Department of Obstetrics and Gynecology, St. Joseph Health Centers and Hospital, Chicago Illinois, May 1995

"Medical, Ethical and Legal Issues in the Care of a Patient with Intrauterine Growth Retardation," Grand Rounds, Department of Obstetrics and Gynecology, Rush-Presbyterian-St. Luke's Medical Center, Chicago, Illinois, April 1994 and Mercy Hospital, Grand Rounds, Department of Obstetrics and Gynecology, Chicago, Illinois, July 1995

"Obstetric and Gynecological Emergencies Requiring Critical Care, " Surgery Critical Care Board Review Course, Cook County Hospital, Chicago, Illinois, August, 1988.

"Hemodynamic Profile Analysis: Case Studies in Obstetrics and Gynecology," Roosevelt-St. Luke's Hospital Critical Care Course, New York, New York, August 1987

"The Pathology of Tissue Oxygenation: A Workshop on Continuous Mixed Venous Oxygen Saturation Monitoring," Roosevelt-St. Luke's Hospital Critical Care Course, New York, New York, August 1987

"Critical Care in Obstetrics and Gynecology," University of Illinois at Champaign-Urbana, Champaign-Urbana, Illinois, February 1987 and Osler Obstetrics and Gynecology Board Review Course, Chicago, Illinois, July 1995

"Continuous Mixed Venous Oxygen Saturation Monitoring of the Critically Ill Obstetric Patient," Grand Rounds, Rush-Presbyterian-St. Luke's Medical Center, Chicago, Illinois, November 1986 and Grand Rounds, Ravenswood Hospital Chicago, Illinois, December 1986

"Using the Swan-Ganz Catheter in Obstetrics and Gynecology," Grand Rounds, Rush-Presbyterian-St. Luke's Medical Center, Chicago, Illinois, November 1986 and GrandRounds,Ravenswood Hospital, Chicago, Illinois, November 1986 and Grand Rounds, St. Joseph Health Centers and Hospital, September 1990

SCIENTIFIC MEETING PRESENTATIONS

"The Use of the Clonogenic Assay in the Chemotherapy of Gynecologic Tumors," Western Association of Oncologists, June 1984

"Continuous Mixed Venous Oxygen Saturation Monitoring of the Critically Ill Obstetric Patient," The Society of Perinatal Obstetricians, February 1987

Maternal Insulin Levels During 3 Hour Glucose Tolerance Testing: Correlation with Maternal and Neonatal Outcome, Fourth International Symposium on Gestational Diabetes, March 1997

MEDICAL JOURNAL PEER REVIEWER

International Journal of Obstetrics and Gynecology
1994 to Present

Journal of Critical Care Medicine,
1996 to Present

Journal of Maternal-Fetal Medicine,
1994 to 1995

PROFESSIONAL ACTIVITY

Member, Board of Advisors
PROGRAMS IN WOMEN'S HEALTH HOME PRENATAL NURSING SERVICES
1990 to 1995

RECOGNITION AWARDS

American Academy of Family Physicians
Recognition for Participation as an Active Teacher in Obstetrics and Gynecology to Family Practice Residents
ST. JOSEPH HEALTH CENTERS AND HOSPITAL, Chicago, Illinois

Senior Resident Award
Department of Obstetrics and Gynecology
RUSH-PRESBYTERIAN-ST.LUKE'S MEDICAL CENTER, Chicago, Illinois
1983

MEDICAL LICENSES

Physician's License
STATE OF INDIANA
1997 to Present

Physician's License
STATE OF ILLINOIS #036059865
July 1979 to Present

COMMONWEALTH OF PENNSYLVANIA
July 1983

STATE OF KANSAS
July 1984

STATE OF NEW YORK
December 1987

PROFESSIONAL SOCIETIES

1998	Member SOCIETY FOR MATERNAL-FETAL MEDICINE
1998	Member AMERICAN INSTITUTE FOR ULTRASOUND IN MEDICINE
1997	Elected Member SOCIETY FOR NEUROSCIENCE
1996	Appointed Member of the Continuing Education Committee ILLINOIS STATE MEDICAL SOCIETY
1997	Appointed To Illinois Membership Committee AMERICAN COLLEGE OF SURGEONS
1990 to Present	Elected Member ASSOCIATION OF PROFESSORS OF GYNECOLOGY AND OBSTETRICS
1995	Elected Fellow FELLOW OF THE AMERICAN COLLEGE OF SURGEONS
1994	Elected Fellow FELLOW OF THE AMERICAN COLLEGE OF OBSTETRICIANS & GYNECOLOGISTS
1994 to Present	Member Committee for Health Policy
1995 to Present	Committee on Fee Mediation CHICAGO MEDICAL SOCIETY

1993 to Present	Member SOCIETY FOR MAGNETIC RESONANCE IN MEDICINE
1986	Associate Member SOCIETY OF PERINATAL OBSTETRICIANS
1986	Member ILLINOIS PERINATAL ASSOCIATION
1984 to Present	Member SOCIETY FOR CRITICAL CARE MEDICINE
1982 to Present	Member AMERICAN MEDICAL ASSOCIATION
1982 to Present	Member ILLINOIS STATE MEDICAL SOCIETY
1982 to Present	Member CHICAGO MEDICAL SOCIETY
1973 to Present	Elected Member SOCIETY OF SIGMA XI PRINCETON UNIVERSITY

of obstruction (Fig. 47–1). Full-sequence **intravenous pyelography** is not done routinely, but injection of contrast media with one or two abdominal x-rays may be indicated by the clinical situation. The usual clinical indications for **cystoscopy** are followed. Although Packham and Fairley (1987) reported **renal biopsy** to be safe and helpful in guiding treatment in 111 pregnant women with renal disease, we agree with others that this procedure can usually be postponed until pregnancy is completed (Lindheimer and colleagues, 2000). If therapy would be changed by biopsy results, then it should be considered.

ORTHOSTATIC PROTEINURIA. Abnormal amounts of protein are sometimes detectable in urine formed while the pregnant woman is ambulatory but not when recumbent. No other evidence for renal disease is apparent. Such orthostatic or *postural proteinuria* has been observed in up to 5 percent of normal young adults. The pregnant woman with orthostatic proteinuria should be evaluated for bacteriuria, abnormal urinary sediment, reduced glomerular filtration rate, and hypertension. In the absence of these abnormalities, especially if protein excretion is not constant, orthostatic proteinuria is probably inconsequential.

PREGNANCY AFTER UNILATERAL NEPHRECTOMY. Because the excretory capacity of two kidneys is much in excess of ordinary needs, and because the surviving kidney usually undergoes hypertrophy with increased excretory capacity, women with one normal kidney most often have no difficulty in pregnancy. Indeed, pregnancy in these women is associated with significant augmentation of renal hemodynamics (Baylis and Davison, 1991). Before advising a woman with one kidney about the risk of future pregnancy, a thorough functional evaluation of the remaining organ is essential.

URINARY TRACT INFECTIONS

These are the most common bacterial infections encountered during pregnancy. Although **asymptomatic bacteriuria** is usual, symptomatic infection may involve the lower tract to cause **cystitis,** or it may involve the renal calyces, pelvis, and parenchyma to cause **pyelonephritis.**

Organisms that cause urinary infections are those from the normal perineal flora. There is now evidence that some strains of *Escherichia coli* have pili that enhance their virulence (Svanborg-Eden, 1982). Also called *adhesins* or *P-fimbriae,* these appendages allow bacterial attachment to glycoprotein receptors on uroepithelial cell membranes. Other markers for virulence include strains that produce hemolysin and have the *papG* gene that encodes the P-fimbriae tip adhesin (Hooton and co-workers, 2000). Although pregnancy itself does not seem to enhance these virulence factors, urinary stasis apparently does, and along with vesicoureteral reflux in some women, it predisposes to symptomatic upper urinary infections.

In the early puerperium, bladder sensitivity to intravesical fluid tension is often decreased as a consequence of the trauma of labor as well as epidural or spinal analgesia. Sensations of bladder distention are also likely diminished by discomfort caused by a large episiotomy, periurethral lacerations, or vaginal wall hematomas. Following delivery, especially when oxytocin infusion is stopped, diuresis follows with copious urine production and bladder distention. Overdistention, coupled with catheterization to provide relief, commonly leads to urinary infection.

ASYMPTOMATIC BACTERIURIA. This refers to persistent, actively multiplying bacteria within the urinary tract without symptoms. The reported prevalence of bacteriuria in nonpregnant women is 5 to 6 percent (Hooton and colleagues, 2000). The incidence during pregnancy varies from 2 to 7 percent, and depends on parity, race, and socioeconomic status. The highest incidence has been reported in African-American multiparas with sickle-cell trait, and the lowest incidence has been found in affluent white women of low parity.

Bacteriuria is typically present at the time of the first prenatal visit, and after an initial negative urine culture, 1 percent or less of women develop urinary infection (Whalley, 1967). A clean-voided specimen containing more than 100,000 organisms per mL is considered evidence for infection. Although smaller numbers of bacteria may represent contamination, lower colony counts may sometimes represent active infection, especially in the presence of symptoms. Thus, it seems prudent to treat lower concentrations, because pyelonephritis may occur with counts of only 20,000 to 50,000/mL of a single uropathogen (Lucas and Cunningham, 1993).

SIGNIFICANCE. If asymptomatic bacteriuria is not treated, about 25 percent of infected women subsequently develop acute symptomatic infection during that pregnancy. Eradication of bacteriuria with antimicrobial agents has been shown to prevent most of these clinically evident infections. Although it is reasonable to perform routine screening for bacteriuria in women at high risk, screening via urine culture may not be cost effective when the prevalence is low. Less expensive tests such as the leukocyte esterase-nitrite dipstick have been shown to be cost effective with prevalences of 2 percent (Rouse and colleagues, 1995). Millar and associates (2000) reported that screening using enzymatic detection of catalase activity in the urine was ineffective.

Another approach for the low-risk population is to perform screening cultures selected by historical factors.

Covert bacteriuria has been associated in some studies with a number of adverse pregnancy outcomes. In early studies by Kass (1962), the incidence of preterm births and perinatal mortality was increased among bacteriuric women given placebo compared with treated 84 women. Kincaid-Smith and Bullen (1965) also reported an increased incidence of low-birthweight infants among untreated bacteriuric women, but they were unable to reduce this with antimicrobial therapy. Other investigators did not corroborate a relationship between bacteriuria and low-birthweight infants (Table 47–1). From evidence currently available it seems unlikely that asymptomatic bacteriuria is a prominent factor in the genesis of low-birthweight or preterm infants.

In other studies, bacteriuria has been linked to an increased incidence of pregnancy hypertension and anemia. Using multivariate analysis for a perinatal registry cohort of 25,746 mother–infant pairs, Schieve and colleagues (1994) reported increased risks for low birthweight, preterm delivery, hypertension or preeclampsia, and maternal anemia. These findings are at variance with those shown in Table 47–2. Gilstrap and colleagues (1981b) compared pregnancy outcomes in 248 pregnant woman in whom bacteriuria was localized to the bladder or kidney and found no association with anemia, hypertension, or low-birthweight infants.

Bacteriuria persists after delivery in many of these women, and there is also a significant number with pyelographic evidence of chronic infection, obstructive lesions, or congenital urinary abnormalities (Kincaid-Smith and Bullen, 1965; Whalley and associates, 1965). Recurrent symptomatic infections are common.

TREATMENT. Women with asymptomatic bacteriuria may be given treatment with any of several antimicrobial regimens. Selection can be on the basis of in vitro susceptibilities, but most often it is empirical. Treatment for 10 days with nitrofurantoin macrocrystals, 100 mg daily, has proved effective in most women. Other regimens include ampicillin, amoxicillin, a cephalosporin, nitrofurantoin, or a sulfonamide given four times daily for 3 days (Table 47–3). Single-dose antimicrobial therapy for bacteriuria has also been used with success (Andriole and Patterson, 1991). The recurrence rate for all of these regimens is about 30 percent. Failure of single-dose regimens may be an indication of upper tract infection and the need for more protracted therapy such as nitrofurantoin, 100 mg at bedtime for 21 days (Lucas

TABLE 47–1. Incidence of Low-birthweight Infants Born to Women with and without Asymptomatic Bacteriuria

	Bacteriuria No. (%)	Uninfected No. (%)
Gilstrap and colleagues (1981b)	248 (12)	248 (13)
Little (1966)	141 (9)	4735 (8)
Norden and Kilpatrick (1965)	114 (15)	109 (13)
Whalley (1967)	176 (15)	176 (12)
Wilson and associates (1966)	230 (11)	6216 (10)
Total and average	909 (12)	11,484 (9)

TABLE 47–2. Adverse Pregnancy Outcomes in Comparison of 248 Women with Asymptomatic Renal or Bladder Bacteriuria

Complication	Bacteriuric Women (%)* Renal (n = 114)	Bacteriuric Women (%)* Bladder (n = 134)	Control Women (%)* (n = 248)
Anemia†	2.6	3.7	2.1
Hypertension	12	15	14
Low-birthweight infants	10	13	13
Fetal growth restriction	8	8	8
Preterm delivery	4	8	5

* All values not significant when compared for each group.
† Hematocrit less than 30.
Modified after Gilstrap and colleagues (1981b).

TABLE 47–3. Antimicrobial Agents Used for Treatment of Pregnant Women with Asymptomatic Bacteriuria

Single Dose
- Amoxicillin, 3g
- Ampicillin, 2 g
- Cephalosporin, 2 g
- Nitrofurantoin, 200 mg
- Sulfonamide, 2 g
- Trimethoprim-sulfamethoxazole, 320/1600 mg

Three-day Course
- Amoxicillin, 500 mg three times daily
- Ampicillin, 250 mg four times daily
- Cephalosporin, 250 mg four times daily
- Nitrofurantoin, 50–100 mg four times daily; 100 mg twice daily
- Sulfonamide, 500 mg four times daily

Other
- Nitrofurantoin, 100 mg four times daily for 10 days
- Nitrofurantoin, 100 mg at bedtime for 10 days

Treatment Failures
- Nitrofurantoin, 100 mg four times daily for 21 days

Suppression for Bacterial Persistence or Recurrence
- Nitrofurantoin, 100 mg at bedtime for remainder of pregnancy

and Cunningham, 1994). For women with persistent or frequent bacteriuria recurrences, suppressive therapy for the remainder of pregnancy may be indicated. One regimen that has been successful is nitrofurantoin, 100 mg at bedtime.

CYSTITIS AND URETHRITIS. There is evidence that bladder infection during pregnancy develops without antecedent covert bacteriuria (Harris and Gilstrap, 1981). Typically, cystitis is characterized by dysuria, urgency, and frequency. There are few associated systemic findings. Usually there is pyuria as well as bacteriuria. Microscopic hematuria is common, and occasionally there is gross hematuria from hemorrhagic cystitis (Fakhoury and co-workers, 1994). Although asymptomatic infection is associated with renal bacteriuria in half of cases, more than 90 percent of the cases of cystitis are limited to the bladder (Harris and Gilstrap, 1981). Although cystitis is usually uncomplicated, the upper urinary tract may become involved by ascending infection. Certainly, 40 percent of pregnant women with acute pyelonephritis have preceding symptoms of lower-tract infection (Gilstrap and associates, 1981a).

TREATMENT. Women with cystitis respond readily to any of several regimens. Harris and Gilstrap (1981) reported a 97 percent cure rate with a 10-day ampicillin regimen. Sulfonamides, nitrofurantoin, or a cephalosporin also are effective when given for 10 days. Recently, as with covert bacteriuria, there has been a trend to use a 3-day course of therapy. The regimens summarized in Table 47–3 will generally prove satisfactory for cystitis. Single-dose therapy as described for asymptomatic bacteriuria has been shown effective for both nonpregnant and pregnant women, but concomitant pyelonephritis must be confidently excluded.

Frequency, urgency, dysuria, and pyuria accompanied by a "sterile" urine culture may be the consequence of urethritis caused by *Chlamydia trachomatis*, a common pathogen of the genitourinary tract. Mucopurulent cervicitis usually coexists and erythromycin therapy is effective (Chap. 57, p. 1493).

ACUTE PYELONEPHRITIS. Renal infection is the most common serious medical complication of pregnancy, occurring in approximately 2 percent of pregnant women. The potential seriousness of acute pyelonephritis during pregnancy can be underscored by the observation of Mabie and associates (1997) that acute pyelonephritis was the leading cause of septic shock during pregnancy. The population incidence varies and depends on the prevalence of covert bacteriuria and whether it is treated. For example, at Parkland Hospital, more than 95 percent of women attend prenatal clinics where bacteriuria screening is performed and treatment given for the 8 percent who are infected. Gratacos and associates (1994) reported a significant reduction in the incidence of pyelonephritis after they instituted a screening program.

Renal infection is more common after midpregnancy. It is unilateral and right-sided in more than half of cases, and bilateral in a fourth. In most women, infection is caused by bacteria that ascend from the lower tract. Between 75 and 90 percent of renal infections are caused by bacteria that have P-fimbriae adhesins (Stenqvist and associates, 1987).

CLINICAL FINDINGS. The onset of pyelonephritis is usually rather abrupt. Symptoms include fever, shaking chills, and aching pain in one or both lumbar regions. There may be anorexia, nausea, and vomiting. The course of the disease may vary remarkably with fever to as high as 40°C or more and hypothermia to as low as 34°C. Tenderness usually can be elicited by percussion in one or both costovertebral angles. The urinary sediment frequently contains many leukocytes, frequently in clumps, and numerous bacteria. In a survey of 190 women admitted to Parkland Hospital, *E coli* was isolated from the urine in 77 percent, *Klebsiella pneumoniae* in 11 percent, and *Enterobacter* or *Proteus* each in 4 percent (Cunningham, 1988). Culture results were similar from 391 women with antepartum pyelonephritis treated at Los Angeles County–University of Southern California Medical Center (Wing and colleagues, 2000). **Importantly, about 15 percent of women with acute pyelonephritis also have bacteremia.**

Although the diagnosis usually is apparent, pyelonephritis may be mistaken for labor, chorioamnionitis, appendicitis, placental abruption, or infarcted myoma, and in the puerperium, for metritis with pelvic cellulitis.

Almost all clinical findings in these women are ultimately caused by endotoxemia, and so are the serious complications of acute pyelonephritis (Chap. 43). A frequent and sometimes dramatic finding is thermoregulatory instability characterized by high spiking fever as high as 42°C followed by hypothermia as low as 34°C (Fig. 47–2). Twickler and associates (1994) have shown a significantly decreased systemic vascular resistance and increased cardiac output in women with acute infection. These changes are mediated by *cytokines* elaborated by macrophages that include *interleukin-1*, previously termed *endogenous pyrogen*, or *tumor necrosis factor* (Parrillo, 1993).

Plasma creatinine should be measured early in the course of therapy. As shown in Figure 47–3, acute pyelonephritis in some pregnant women causes a considerable reduction in the glomerular filtration rate that is reversible. From 1 to 2 percent of women with antepartum pyelonephritis develop varying degrees of respiratory insufficiency caused by endotoxin-induced alveolar in-

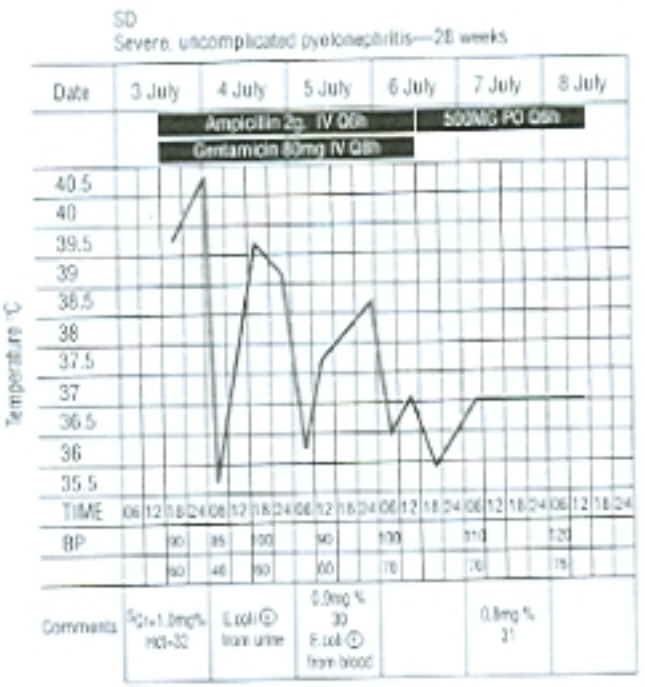

FIGURE 47–2. Vital signs graphic chart from a 25-year-old primigravida with acute pyelonephritis at 28 weeks' gestation. (From Cunningham and colleagues, 1987, with permission.)

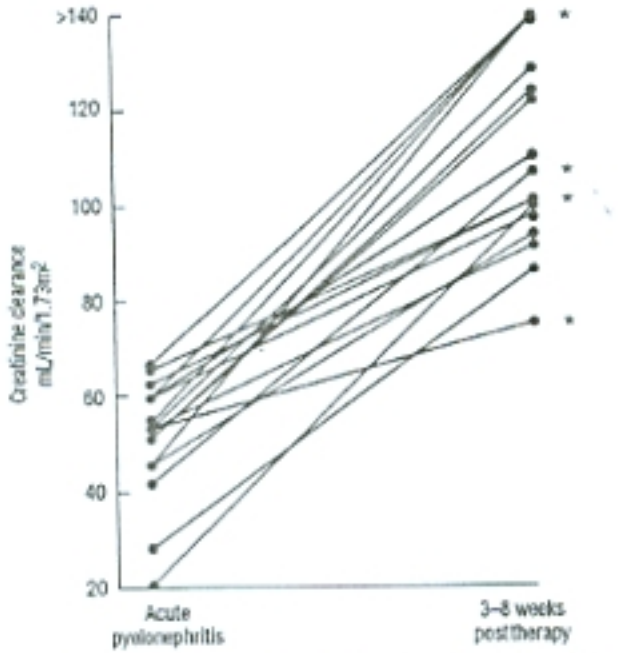

FIGURE 47–3. Endogenous creatinine clearance values in 18 pregnant women during and 3 to 8 weeks after an attack of acute pyelonephritis. Asterisk indicates patients reevaluated while still pregnant. (From Whalley and colleagues, 1975, with permission.)

jury and pulmonary edema (Cunningham and associates, 1987; Sanchez-Ramos and colleagues, 1995). In some women, pulmonary injury is severe with resultant **acute respiratory distress syndrome.** Occasionally, tracheal intubation with mechanical ventilation is lifesaving (Fig. 47–4).

Graham and associates (1993) confirmed that institution of antimicrobial treatment in these women was followed by increased uterine activity. This likely is due to endotoxin release. **Towers and co-workers (1991) reported that 8 percent of women with acute pyelonephritis who were given β-agonist tocolysis, developed respiratory insufficiency.** This is related to plasma colloid osmotic pressure decrease, alveolar capillary membrane injury, and sodium and fluid retaining properties of β-agonists (Lamont, 2000).

Endotoxin-induced **hemolysis** is also common, and about one third of these women develop acute anemia (Cox and colleagues, 1991). Recent evidence is indicative that acute pyelonephritis does not affect erythropoietin production either acutely or during the next several days of infection (Cavenee and colleagues, 1994).

MANAGEMENT. One scheme for management of the pregnant woman with acute pyelonephritis is shown in Table 47–4. Although we routinely obtain cultures of urine and blood, Wing and co-workers (2000) have recently shown in prospective trials that they are of limited clinical utility. **Intravenous hydration to ensure adequate urinary output is essential.** Because bacteremia and endotoxinemia are common, these women should be watched carefully to detect symptoms of endotoxin shock or its sequelae. Urinary output, blood pressure, and temperature are monitored closely. High fever should be treated, usually with a cooling blanket. Routine renal ultrasonography has not been shown to be useful and should be reserved for those women unresponsive to initial treatment (Seidman and colleagues, 1998).

These serious urinary infections usually respond quickly to intravenous hydration and antimicrobial therapy. The choice of drug is empirical, and ampicillin, plus gentamicin, cefazolin, or ceftriaxone have been shown to be 95 percent effective in randomized trials (Wing and colleagues, 1998, 2000). Ampicillin resistance of *E coli* has become common and only half of strains are sensitive in vitro to ampicillin, but most are sensitive to cefazolin (Millar and Cox, 1997; Wing and associates, 2000). For these reasons, many clinicians prefer to give gentamicin or another aminoglycoside with ampicillin. Serial determinations of serum creatinine are important if nephrotoxic drugs are given. Finally, some prefer a cephalosporin or extended-spectrum penicillin, which have been shown to be effective in 95 percent of infected

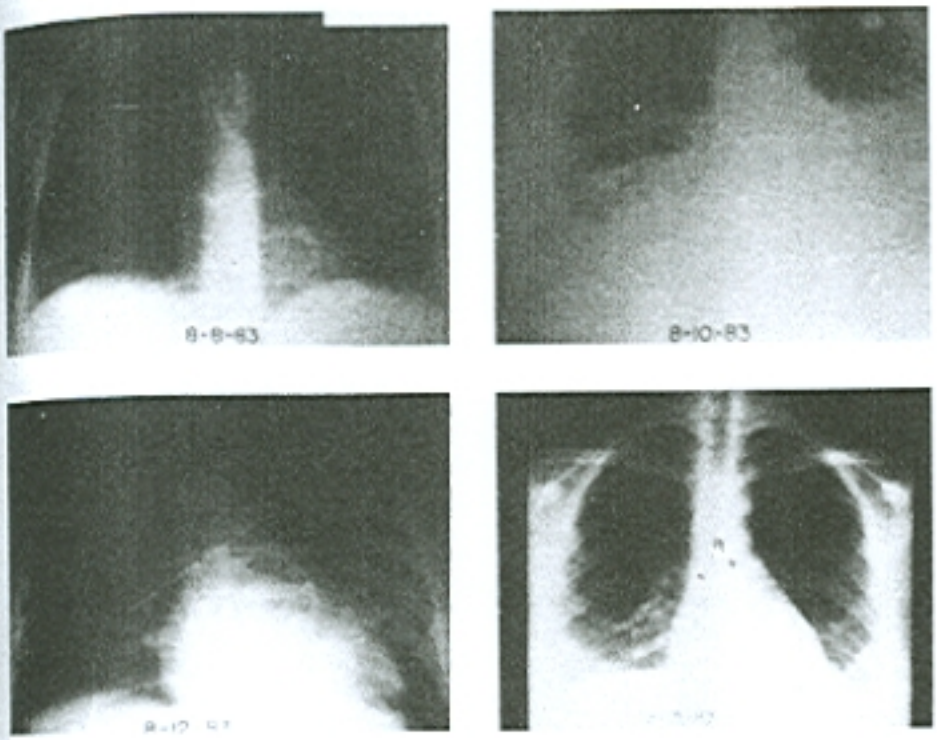

FIGURE 47–4. An 18-year-old multipara with acute pyelonephritis at 20 weeks had a normal radiograph when admitted 8-8-83. Respiratory distress 20 hours later was accompanied by a left-sided pulmonary infiltrate, which progressed to bilateral infiltrates by 8-10-83. The infiltrates improved, and she had a normal x-ray by 8-15-83. (From Cunningham and colleagues, 1987, with permission.)

women (Millar and Cox, 1997; Sanchez-Ramos and associates, 1995).

Clinical symptoms for the most part resolve during the first 2 days of therapy; but even though the symptoms promptly abate, many authors recommend therapy for a total of 7 to 10 days. Cultures of urine usually become sterile within the first 24 hours. Because changes in the urinary tract induced by pregnancy persist, reinfection is possible. If subsequent cultures of the urine are positive, we give nitrofurantoin, 100 mg at bedtime, for the remainder of pregnancy.

TABLE 47–4. Management of the Pregnant Women with Acute Pyelonephritis

1. Hospitalization
2. Urine and blood cultures
3. Hemogram, serum creatinine, and electrolytes
4. Monitor vital signs frequently, including urinary output (place indwelling bladder catheter if necessary)
5. Intravenous crystalloid to establish urinary output to at least 30 mL/hr
6. Intravenous antimicrobial therapy
7. Chest x-ray if there is dyspnea or tachypnea
8. Repeat hematology and chemistry studies in 48 hours
9. Change to oral antimicrobials when afebrile
10. Discharge when afebrile 24 hours; consider antimicrobial therapy for 7–10 days
11. Urine culture 1–2 weeks after antimicrobial therapy completed

Modified from Lucas and Cunningham (1994).

OUTPATIENT MANAGEMENT. Wing and associates (1999) described a randomized clinical trial in which they compared oral versus intravenous antimicrobial therapy for 92 highly selected women with antepartum pyelonephritis. They reported no significant differences in clinical responses or pregnancy outcomes between inpatients and outpatients. Importantly, two thirds of women were not considered candidates for outpatient therapy. Of those treated as outpatients, 30 percent were unable to adhere to their treatment regimen. All women in this trial received in-hospital intramuscular ceftriaxone, two 1-g doses 24 hours apart, before those randomized to early discharge were permitted to leave the hospital. Studies such as this suggest that outpatient management of pregnant women with acute pyelonephritis is applicable to very few women and it mandates close evaluation both before and after hospital discharge.

MANAGEMENT OF NONRESPONDERS. Almost 95 percent of pregnant women will be afebrile by 72 hours (Cunningham and associates, 1973; Wing and col-

leagues, 2000). If clinical improvement is not obvious by 48 to 72 hours, then the woman should be evaluated for urinary tract obstruction. A search is made for abnormal ureteral or pyelocaliceal distention. Most women with continuing infection and serious sequelae will have no evidence for obstruction, but some are found to have obstruction from calculi. Many investigators prefer renal sonography to detect underlying lesions, but its sensitivity is decreased in pregnancy and stones may not be visualized (Butler and associates, 2000; Maikranz and colleagues, 1987). Pyelocaliceal dilatation, urinary calculi, and possibly an intrarenal or perinephric abscess or phlegmon may be visualized (Cox and Cunningham, 1988). Sonar is not always successful in localizing these lesions; thus a negative examination should not prompt cessation of the workup in a woman with continuing urosepsis.

In some cases, a plain abdominal radiograph is indicated, because nearly 90 percent of renal stones are radiopaque. Possible benefits far outweigh any minimal fetal risk from radiation. If negative, then intravenous pyelography, modified to limit the number of radiographs taken after contrast injection, is recommended. The "one-shot pyelogram," in which a single radiograph is obtained 30 minutes after contrast injection, usually provides adequate imaging of the collecting system so that stones or structural anomalies can be detected (Butler and colleagues, 2000).

Passage of a double-J ureteral stent will relieve the obstruction in most cases (Rodriguez and Klein, 1988). If unsuccessful, then percutaneous nephrostomy is done. If this fails, surgical removal of renal stones is required for resolution of infection. Retrograde pyelography may disclose an end-stage obstructed kidney with pyonephrosis as a cause of continuing sepsis. In these cases, calculi frequently coexist, and nephrectomy may be lifesaving.

FOLLOW-UP. Recurrent infection, both covert and symptomatic, is common and can be demonstrated in 30 to 40 percent of women following completion of treatment for pyelonephritis (Cunningham and associates, 1973). Unless measures are taken to ensure urine sterility, then nitrofurantoin, 100 mg at bedtime, is given for the remainder of the pregnancy. Van Dorsten and co-workers (1987) reported that this regimen reduces recurrence of bacteriuria to 8 percent.

CHRONIC PYELONEPHRITIS. This disease is chronic interstitial nephritis thought to be caused by bacterial infection. In many cases, classical radiological scarring is accompanied by ureteral reflux with voiding; thus the term **reflux nephropathy.** Chronic infection is frequently not symptomatic, and in advanced cases, symptoms are those of renal insufficiency. Fewer than half of women with chronic pyelonephritis have a clear history of preceding cystitis, acute pyelonephritis, or obstructive disease. The pathogenesis of this disease therefore is obscure, but it is doubtful that it is simply from persistent bacterial infection. Certainly, very few individuals with recurrent clinical episodes of urinary infections develop chronic infections or progressive renal involvement.

Maternal and fetal prognosis depends on the extent of renal destruction. El-Khatib and colleagues (1994) and Jungers and colleagues (1996) reported outcomes in 697 pregnancies in 290 women with reflux nephropathy. Impaired renal function and bilateral renal scarring were associated with increased maternal complications. When chronic pyelonephritis or any other chronic renal lesion is complicated by bacteriuria during pregnancy, there is an associated risk of superimposed acute pyelonephritis, which may lead to further deterioration. Martinell and colleagues (1990) found that almost half of women with renal scarring following childhood urinary infection had bacteriuria when pregnant. Renal injury as a consequence of chronic urinary tract infection beginning in childhood is much less common than it was early in the 20th century, probably as a result of improved health care (Hellerstein, 1999).

NEPHROLITHIASIS

Urinary stones are more common in men than women, and their average age of onset is in the third decade. Calcium salts make up about 80 percent of renal stones, and in half of these, idiopathic hypercalciuria is the most common predisposing cause (Asplin and colleagues, 1998). Hyperparathyroidism should be excluded. Familial occurrence is frequent, and patients with a previous stone form another stone every 2 to 3 years. Struvite stones are associated with infection, and often *Proteus* is cultured from the urine. Uric acid stones are even less common. Stones of the calcium oxalate variety are the most common encountered during pregnancy (Maikranz and colleagues, 1994).

Patients with calcium stones caused by hypercalciuria frequently respond to thiazide diuretics, with diminished stone formation. Patients with stone disease should be advised to keep well hydrated. In general, obstruction, infection, intractable pain, or heavy bleeding are indications for stone removal. Placing a flexible basket via cystoscopy to ensnare the calculus has been used with the greatest frequency, and this method is reasonable for use in pregnant women. **Lithotripsy** has replaced surgical therapy in many cases. This can be employed by extracorporeal means, percutaneous ultrasonic lithotripsy, or by ureteroscopic laser ablation of stones. Understandably, there is little information concerning its use during pregnancy.

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July 27, 2004

Kenneth M. Levine & Associates
370 Washington Street
Brookline Village, MA 02445

RE: Borgquist v. Stacy Veitch, M.D. and
Deborah Bradley, M.D.
Our File No: 201027-01 (Veitch) and 201028-01 (Bradley)

Dear Mr. Levine:

I am responding to your recently received demand package on the above case. Our evaluation of both insured physicians, as they pertain to this case, is almost complete. I will contact you when I am certain what our position is going to be.

Respectfully
Joshua Formica
Claims Examiner (518) 786-2753

KENNETH M. LEVINE & ASSOCIATES
ATTORNEYS AT LAW
370 WASHINGTON STREET
BROOKLINE, MASSACHUSETTS 02445
(617) 566-2700
Fax (617) 566-6144

July 28, 2004

Joshua Formica
MLMC
8 British American Boulevard
Latham, New York 12110

RE Borgquist v. Veitch/Bradley
Your file No. 201027-01/201028-01

Dear Mr. Formica,

Thank you for your recent correspondence. Based upon your correspondence, I will delay for short period of time the filing of a motion for summary judgment. I will also delay sending you a letter of notice pursuant to Massachusetts General Laws Chapter 93A and 176D which concern your good faith obligation to resolve the Borgquist matter.

I look forward to hearing from you. Should you have any questions, please do not hesitate to contact me.

Very truly yours,

Kenneth M. Levine

KML/aaa

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FAX (617) 566-6144

September 8, 2004

Joshua Formica
MLMC
8 British American Boulevard
Latham, New York 12110

RE Borgquist v. Veitch/Bradley
Your file No. 201027-01/201028-01

Dear Mr. Formica,

I do need to hear from you concerning resolution of this case. If we cannot resolve the case I do intend to pursue a motion for summary judgment and the deadline to file such a motion is fast approaching.

Very truly yours,

Kenneth M. Levine

KML/aaa

Ex 6 Oct 12 ltr

KENNETH M. LEVINE & ASSOCIATES
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October 12, 2004

Joshua Formica
MLMC
8 British American Boulevard
Latham, New York 12110

RE Borgquist v. Veitch/Bradley
Your file No. 201027-01/201028-01

Dear Mr. Formica,

Should I not hear from you concerning settlement of this case within five days, I will forward a letter to you concerning M.G.L. 93A and 176 D. Those statutes concern insurance bad faith. Apparently, you are not going to take any action to settle this case unless I begin the process of filing suit against MLMC. Thirty days after sending the letter I will file suit based upon the statute against MLMC in the United States District Court for the District of Massachusetts.

If you would like to discuss resolution of the case, please do not hesitate to contact me. Otherwise, expect to receive my letter pursuant to the above statutes.

Very truly yours,

Kenneth M. Levine

KML/aaa

Exh Oct 19 ltr

OCT-19-2004 10:37 FAX 01/01

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October 19, 2004

Kenneth M. Levine & Associates
370 Washington Street
Brookline Village, MA 02445

RE: Borgquist v. Veitch/Bradley
Our File No: 201027-01/201028-01

Dear Mr. Levine:

I am responding, once again, to your latest correspondence and voice mail in which you threaten 93A. As you will note, I returned your call late this morning and left a message with your receptionist. Here is where MLMIC stands with this case; we have a supportive OB review regarding standard of care issues as they pertain to both Dr. Veitch and Bradley and we await one more review from a pathologist. Once the pathologist review is completed we will take an honest look at the file and finalize our position. As far as Bad Faith is alleged, we do not believe liability to be straightforward and we have the expert support to back that up. We also tried on and off to obtain the pathology slides from your office and were met with stagnation to the point where our defense counsel had to file a motion to compel. Furthermore, we recently received 15 more slides in which your expert inadvertently failed to get back to you.

Respectfully
Joshua Formica
Joshua Formica
Claims Examiner

cc: Chris Lavoie
cc: Jennifer Boyd Herlihy

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(617) 566-2700
FAX (617) 566-6144

October 20, 2004

Joshua Formica
MLMC
8 British American Boulevard
Latham, New York 12110

RE Borgquist v. Veitch/Bradley
Your file No. 201027-01/201028-01

Dear Mr. Formica,

I am in receipt of your most recent letter concerning settlement of the above referenced case. I understand that you are completing your review of the case. Obviously, I fell very strongly that there is no defense to the Plaintiffs' case, and that this case should be settled. Massachusetts General Laws Chapter 93 A §9(1)(3) and Chapter 176 D, §3 allow me to file suit directly against the insurer if the failure to effectuate settlement is based upon unfair or deceptive acts by the insurer. The law requires that I make written demand thirty days prior to filing suit.

In my opinion, you have had ample time to evaluate your position in this case. I appreciate that you feel otherwise. I am sending you this letter of demand pursuant to to Massachusetts General Laws Chapter 93 A §9(1)(3) and Chapter 176 D, §3 at this time. The law allows you thirty days to respond. I assume that you will have a reply within thirty days. In this way, should you decide not resolve the case through settlement, I will be able to file suit against MLMC in the United States District Court thirty days from now, and will not have to wait any additional time.

As stated, I am writing to you pursuant to Massachusetts General Laws Chapter 93 A §9(1)(3) and Chapter 176 D, §3 and the case of *Miller v. Risk Management Foundation of the Harvard Medical Institutions, Inc.* 36 Mass. App. Ct. 411 (1994) to present written demand to the Healthcare Underwriters Mutual Insurance Company for relief from the unfair and deceptive acts and practices employed by your agents, servants or employees in regards to the case of Borgquist v. Veitch/Bradley.

In compliance with clause 3 of Chapter 93A §9, I submit this demand for relief thirty days prior to the commencement of a civil action based upon the violation by your company of the provisions of Massachusetts General Laws, Chapter 176D, §3, clause 9(f). I demand that you retain the original of the correspondence for its expected use as evidence in a court proceeding.

This letter shall serve as compliance with the provisions of Chapter 93A, §9, clause 3 which requires me to "reasonably describe the unfair act or practice relied upon and the injury suffered."

UNFAIR OR DECEPTIVE ACTS OR PRACTICES

As you are aware, the discovery that has been conducted to date has clearly established that the Defendants acted negligently during the course of their care for Sarah Borgquist. Dr. Veitch failed to appreciate, diagnose and appropriately treat pyelonephritis in Mrs. Borgquist given her symptoms which included flank pain, nausea and vomiting with fever, all in the face of a known E. Coli asymptomatic bacteriuria that was resistant to ampicillin. Dr. Veitch failed to timely admit Mrs. Borgquist and failed to administer appropriate intravenous antibiotics for the E. Coli pyleonephritis. Had Dr. Veitch properly cared for Mrs. Borgquist, her illness would not have progressed to pyelonephritis and urosepsis causing preterm labor and fetal demise.

Dr. Bradley fell below the standard of care in her care and treatment of Ms. Borgquist as well. Dr. Bradley failed to appreciate, diagnose and appropriately treat Mrs. Borgquist given her known history of a recent E. Coli asymptomatic bacteriuria coupled with her very recent history of fever, flank pain, nausea and vomiting. Had Dr. Bradley appropriately diagnosed and treated Mrs. Borgquist's E. Coli asymptomatic bacteriuria with adequate intravenous coverage it would probably not have proceeded to pyelonephritis and urosepsis causing preterm labor and fetal demise.

Mrs. Borgquist was an 18 year old gravida I, para I with a twin gestation who was seen by Stacy Veitch, M.D. on or about June 4, 2001. At that time, Dr. Veitch prescribed a seven-day course of Amoxicillin (500 mg. TID) for the treatment of a urine culture, taken on May 25, 2001, which was positive for E. Coli.

The following day, June 5, 2001, Mrs. Borgquist presented to Beverly Hospital for a scheduled ultrasound. Dr. Veitch received a telephone call from the ultrasound technician concerning Mrs. Borgquist, who was then present for the ultrasound. According to Dr. Veitch's entry in Mrs. Borgquist's medical record, Mrs. Borgquist was nauseous and vomiting all day. She vomited two basins of green fluid while in the ultrasound room. In addition, the medical record reveals that Mrs. Borgquist was febrile to 102. 4 and complaining of back pain. Dr. Veitch sent Mrs. Borgquist to the Medical Day Care for intravenous fluids and one dose of Zofran. Mrs. Borgquist was then discharged without receiving intravenous antibiotics.

On June 8, 2001, Mrs. Borgquist presented to Beverly Hospital complaining of vomiting and diarrhea. She was given intravenous hydration per Dr. Veitch's orders, and was also prescribed Tylenol. Mrs. Borgquist was again discharged without receiving intravenous antibiotics.

On June 9, 2001 Mrs. Borgquist again presented to Beverly Hospital. Dr. Bradley saw her with complaints of cramping. She was given one dose of Mefoxin intravenously and discharged.

On or about June 10, 2001, Mrs. Borgquist presented to Beverly hospital in preterm labor complaining of cramps and bleeding. She was found to have urosepsis. Ms. Borgquist was admitted, given one dose of intravenous mefoxin and then transferred to Beth Israel Hospital. Mrs. Borgquist's preterm labor progressed and on June 10, 2001 at twenty-three weeks she delivered her twins vaginally with fetal demise on delivery.

The Deposition of Dr. Bradley was taken on March 24, 2004. Based upon the deposition, the Plaintiffs will move for summary judgment against Dr. Veitch. Dr. Bradley clearly stated that the standard of care for a febrile patient complaining of diarrhea, and vomiting while in the hospital it to admit the patient for a course of IV antibiotics. Dr. Bradley confirmed that if the patient is given oral antibiotics, and is vomiting, the medication would not have an effect. In the case of Sarah Borgquist, on June 5th and again on June 8th, Dr. Veitch certainly should have prescribed IV antibiotics. Had Dr. Veitch done so, Sarah Borgquist would not have gone into pre-term labor, which ultimately caused the death of her twins.

The Autopsy report indicates the presence of e coli bacteria in the lungs of the twins, although the real issue is that the urosepsis caused Mrs. Borgquist to go into active labor, and deliver the twins, before they were able to sustain life outside of the womb. In fact, the autopsy slides and findings are irreleveant. The twins did not die because they were ill, they died because their mother was ill, went untreated by Dr. Vietch and Dr. Bradley, resulting premature delivery of the infants. Dr. Bradley herself has stated that untreated urosepsis can result in early labor and delivery.

I urge you to move toward settlement of this case. According to *Susan Morrison, v. Toys "R" US, Inc.*, Massachusetts, 13 Mass.L.Rptr. 134, the legal duty "to effectuate prompt, faith and equitable settlements of claims in which liability has become reasonably clear" is a statutory duty. G.L. c. 176D, S. 3(9)(f); *Clegg v. Butler*, 424 Mass. 413, 418-19 (1997). The law imposes this duty on persons "engaged in the business of insurance" who have the statutory duty to effectuate prompt, fair settlements when liability has become reasonably clear. G.L. c. 176D, s. 1(a) and s. 3; *Poznik v. Massachusetts Medical Professional Insurance Association*, 417 Mass. 48, 51 (1994).

The "business of insurance 'involves profit driven decisions about premiums, commissions, marketing, reserves and settlement policies and practices." *Poznik v. Massachusetts Medical Professional Insurance Association*, 417 Mass. 48, 51 (1994).

The Plaintiff has made a myriad of attempts to settle this case to no avail. Demand is made for the full amount of Dr. Bradley and Dr. Veitch's' policies of insurance. Should you refuse to discuss settlement prior to trial, I shall inform Dr. Bradley and Dr. Veitch of his ability to assign to me his right against Healthcare Underwriters Mutual Insurance Company, should the verdict of the jury exceed the limit of his policy. Again, I urge you to resolve this matter for the good of all concerned. If no reasonable offer is made within 30 days, we will file suit in the United States Districts Court.

I look forward to hearing from you.

Very truly yours,

KENNETH M. LEVINE & ASSOCIATES

Kenneth M. Levine

KML/aaa

KENNETH M. LEVINE & ASSOCIATES
ATTORNEYS AT LAW
370 WASHINGTON STREET
BROOKLINE VILLAGE, MASSACHUSETTS 02445
(617) 566-2700
FAX (617) 566-6144

November 11, 1002

Joshua Formica
MLMC
8 British American Boulevard
Latham, New York 12110

RE Borgquist v. Veitch/Bradley
Your file No. 201027-01/201028-01

Dear Mr. Formica,

Having not heard from you in reply to my October 20, 2004 letter sent pursuant to Massachusetts General Laws Chapter 93A and 176D, I am writing to confirm that on November 21, 2004 I will file suit against MLMC in the United States District Court in Massachusetts. I am also preparing a motion for summary judgment in the case which I will forward to you and counsel within a few days.

I enclose for you review a copy of the discharge summary prepared by Dr. Bruce Cohen of the Beth Israel Hospital in Boston. In particular I refer you to a section of page7, which I have highlighted in yellow. The section reads:

> "It is believed that she had an inadequately treated E Coli infection which proceeded to urosepsis which caused her to go into preterm labor and deliver at 23 weeks."

In light of the clear evidence of medical malpractice causing the preterm labor of the twins, and causing their death, there is no reason this case has yet been resolved.

If we were to speak, you would find I am a reasonable person, but I cannot condone the continued failure of MLMC to address settlement of this case.

I look forward to hearing from you.

Very truly yours,

Kenneth M. Levine

Kml/aaa
enclosure

Patient: 1539076 BORGQUIST,SARAH
Report Date: 06/15/01

Name: BORGQUIST, SARAH Unit No: 1539076

Admission Date: 06/10/2001 Discharge Date: 06/15/2001

Date of Birth: 01/27/1983 Sex: F

Service: OBSTETRICS

HISTORY OF PRESENT ILLNESS: The patient is an 18 -year-old gravida 1, now para 1, 0, 0, 0 (2), who presented at 23 0/7 weeks with a twin gestation. Dating was by 15 week ultrasound. She presented from Beverly Hospital where she had been evaluated and diagnosed with preterm labor. The patient was also having vaginal bleeding. At the time of presentation, she denied any headache, visual changes, epigastric pain, or right upper quadrant pain. She had no chest pressure or shortness of breath. She did complain of right flank tenderness. She was having some mild cramping and vaginal bleeding.

Regarding the patient's history prior to transfer to Beth Israel - Deaconess Medical Center, she was seen at Beverly Hospital on June 4. At that time she was diagnosed with a urinary tract infection due to E coli. The culture had been done on May 25; however, the patient was told of her diagnosis on June 4. She was started on amoxicillin on that day. She did take one days worth of amoxicillin; however, she began vomiting bilious fluids and was unable to tolerate her medication. On June 5, she presented again to Beverly Hospital for a scheduled ultrasound. She was still vomiting at that time and received IV hydration. She was taking Tylenol for right flank pain. The patient does report that on Tuesday, June 5, she had a maximum temperature of 102.5 F.

Subsequently for the remainder of the week, she reports remaining afebrile. She continued to have nausea and vomiting and flank pain, but no fevers. She was seen again for hydration at Beverly Hospital on Friday. She was switched to Keflex at that time. She was still having nausea and vomiting and flank pain. She was discharged home with precautions and at approximately 01:00 AM on Saturday began having cramping and some mild spotting. She went to the hospital and was monitored and was noted to have infrequent contractions. Her cervix was checked at that time and was long, closed, and posterior. She began receiving IV antibiotics for her inadequately treated

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urinary tract infection. She received mefoxin. There were no sensitivities from the E coli culture from May 25, of note.

The degree of vaginal bleeding at this time was approximately, according to the patient, about a half cup of bright red blood, but no clots. She was afebrile on presentation early Saturday morning at Beverly Hospital. Her contractions became every two to four minutes, lasting twenty to thirty seconds. Her vaginal examination changed from long, closed, and posterior to 1.0 cm dilated and 80% effaced. She was started on magnesium sulfate, given a 4.0 gm bolus and then 2.0 gm per hour IV.

Her labs at this time were remarkable for a white count of 10.1, hematocrit of 29.7, platelets of 98,000. She had a neutrophil count of 86% and 7% lymphocytes. Her urinalysis was remarkable for no glucose, ketones, or nitrites, 1+ proteinuria and small blood. There were greater than 100 white blood cells in her urine at this time and a few bacteria and 10 to 12 red blood cells. Her coags were remarkable for an INR of 1.18, her PTT was 38.8 and her PT was 13.3. Her fibrinogen was 610. Regarding her electrolytes, her sodium was 132, her potassium was 3.0, her chloride was 103, her bicarbonate was 20, her BUN was 12, her creatinine was elevated at 1.1, her glucose was 95. Her albumin was 2.0, her calcium 8.2, her total bilirubin 1.8, her LDH 431, her alkaline phosphatase 113, her AST 208, and her ALT 197. Her prenatal labs were unremarkable of note.

Regarding the remainder of the patient's prenatal course, she had been diagnosed with dichorionic-diamniotic twins on April 17. Her dating was by a 17 week ultrasound. She had another ultrasound on June 5 which showed an estimated fetal weight of twin A of 536 gm and of twin B 527 gm. This was at 22 2/7 weeks gestation. The twins were vertex transverse at that time.

PAST MEDICAL HISTORY: The patient reported no past medical history, but did note that she had had frequent urinary tract infections in high school.

PAST SURGICAL HISTORY: She had no surgical history.

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OBSTETRICAL HISTORY: This was her first pregnancy.

GYN HISTORY: Regarding her gynecologic history, she had no history of abnormal Paps, sexually transmitted diseases, endometriosis, ovarian cysts, or other GYN history.

SOCIAL HISTORY: She was a nonsmoker, living with her husband John.

ADMITTING MEDICATIONS: Included prenatal vitamins. She had not tolerated po amoxicillin or Keflex in the past week.

ALLERGIES: She had no drug allergies.

PHYSICAL EXAMINATION: On presentation at Beth Israel - Deaconess Medical Center, her vital signs were a temperature of 98.8 F, respirations 18, pulse 129, blood pressure 98/39. Her cardiac examination and lung examination were unremarkable. Her abdomen was soft and nontender to palpation with no rebound or guarding. Her fundus was nontender. She had good bowel sounds. Her extremities were remarkable for 2+ deep tendon reflexes and two beats of clonus bilaterally. She did have some 1+ edema in her lower extremities. Good pulses were noted.

She did have costovertebral angle tenderness on her right side and she was noted to be contracting every two to four minutes. These contractions were palpable and noted on the monitor. Fetal heart rate spot checks showed A and B to be in the 150s, confirmed by ultrasound. Her cervical examination was 3.0 cm, 100% effaced, with a bulging bag of water. Her ultrasound showed twins in the vertex transverse presentation.

At this time, given the patient's clinical picture as follows: low blood pressures, 1+ proteinuria, elevated liver function tests, abnormal coags and low platelets, but no other clinical complaints consistent with preeclampsia, the differential diagnosis included urosepsis with inadequately treated E coli urinary tract infection, an abnormal presentation of preeclampsia complicated by HELLP syndrome, and the remote possibility that the patient had an unusual presentation of fatty liver. This diagnosis was considered

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because the patient's liver function tests were elevated and her initial glucose on presentation at Beth Israel - Deaconess Medical Center was 51. Her labs were redrawn and she was monitored carefully. She was maintained on her magnesium sulfate, both for her contractions and for the possibility of preeclampsia.

Repeat labs showed a white count of 10.3, hematocrit of 28, platelets of 103,000. PT 13, PTT 36.8, FDP 40 to 80, D-dimer greater than 2,000, fibrinogen is 658. Her urinalysis was remarkable for no nitrites, protein, or glucose, white blood cells 27, red blood cells 23. Her electrolytes were remarkable for a sodium of 135, potassium 2.8, chloride 102, bicarbonate 19, glucose 51, BUN and creatinine 13 and 0.9 respectively. Her ALT was 264, her AST was 270, her LDH was 554, her magnesium level was 5.1.

The patient was hydrated with IV fluids and D5 LR and fingersticks were done periodically. Her glucose did eventually level out to the 90s to 100s. She had excellent urine output throughout her stay here. Her vital signs were remarkable for the fact that she remained afebrile. Her blood pressures hovered in the mid 80s-100/38-45. She continued to contract and was counseled that delivery was likely imminent. Given that the twins were 23 weeks, the patient was in agreement that resuscitation would be unlikely unless the babies came out quite vigorous.

The Neonatal Intensive Care Unit was present at the time of delivery. At approximately 12:00 noon on June 10, the patient delivered her twins. Twin A was a male in the vertex presentation with Apgar's of 1 and 1. Twin B was also a male, delivered as a footling breech extraction, Apgar's 1 and 1. The placenta was delivered intact with a three vessel cord times two and no anomalies. Estimated blood loss at delivery was 400 cc. The Neonatal Intensive Care Unit was present at the delivery.

The fetal heart rates were in the 30s when the babies were delivered and they were allowed to expire. The patient opted for her own interment. She also had an autopsy done on the twins. Result of that autopsy are pending.

At 02:00 PM the patient's labs were repeated. It was noted

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that her hematocrit had dropped slightly to 26.2. Her white count remained stable at 11.4. Her D-dimer was still greater than 2,000. Her urinalysis was remarkable for 87 white blood cells. Her AST and ALT remained mildly elevated in the 308 and 279 range respectively. Her K remained low at 2.6 and was being repleted with her IV fluids. Her platelets were 93,000. Her urine output remained excellent and her blood pressures remained in the same range of 90s/50s. She was noted to be less tachycardic with her pulse in the 90s. Her haptoglobin was drawn and noted to be normal at 193. This was inconsistent with a hemolytic picture.

At this point the working diagnosis became urosepsis which would account for the patient's elevated liver function tests, borderline low blood pressure, and lack of hemolysis. It would also explain why she had no pregnancy induced hypertension complaints whatsoever. She was started on IV Ancef and gentamicin at 100 mg of a loading dose and 80 mg q eight hours of the gentamicin. The Ancef was 1.0 gm q eight hours. A smear was sent to the hematologist, who said that there were no signs on her smear of any kind of hemolytic process. Of note, her reticulocyte count was on the low side, given her anemia at 0.4.

At approximately 11:00 PM on the night of 06/10/01, the patient spiked to 101.0 F. Her other vital signs at that time were a blood pressure of 110/52 and a pulse of 108. Her physical examination was benign at that time with the exception of right flank tenderness. Her urine output was excellent. Her labs were relatively stable with a rising potassium. Her D-dimer was falling. Her coags were remarkable for a mildly elevated INR of 1.2. Her hematocrit stabilized at 24. Her haptoglobin remained normal at 186.

Blood and urine cultures were drawn. She was maintained on magnesium sulfate, Ancef, and gentamicin. On hospital day two at 05:30 in the morning, the patient was examined and she was afebrile at that time. Her urine output continued to be excellent. The remainder of her vital signs were stable. Her physical examination was again unremarkable. The working diagnosis continued to be urosepsis with a mild DIC picture. She continued to be stable and on the morning of June 11, her magnesium sulfate was discontinued. She was sent to the floor later that day.

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The patient was seen at morning rounds on June 12 and was noted to be feeling much better. She had a slight temperature overnight of 100.3 F at midnight. Her vital signs were stable with a blood pressure of 110/60 and a pulse of 96. She was saturating well on room air and her urine output was 90 cc to 100 cc for the prior day. Her physical examination was relatively benign. It was only remarkable for mild right flank tenderness. She had labs drawn that morning. Her gentamicin peak and trough were noted to be low and she was increased to 100 mg of gentamicin every eight hours. Blood and urine cultures continued to be negative.

She was started on iron and the remainder of her labs were noted to be relatively unremarkable. At 03:00 AM on June 13, the patient spiked to 102 F. Blood cultures were drawn at that time. She was examined and her physical examination was only remarkable for very mild fundal tenderness and again, right back pain. She had minimal cramping and bleeding.

At this time the following reasons were entertained for her spiking temperatures: endometritis following her delivery, E coli urinary tract infection which was being inadequately treated with lower doses of gentamicin. There was also a remote possibility of retained products of conception. The decision was then made to start the patient on 600 mg of clindamycin IV every eight hours, in addition to her Ancef and gentamicin.

On June 13, the patient's maximum temperature was 101.3 F at 04:00 in the afternoon. She was afebrile on the morning of June 14 at rounds. Her vital signs continued to be stable and her labs were returning to normal with platelets of 101,000, ALT of 75, and AST of 32. Her cultures continued to be negative.

At this point, given her continued temperature spikes, the decision was made to do a renal ultrasound to rule out a stone and hydronephrosis, which would make it more difficult to clear up her urinary tract infection. A pelvic ultrasound was also done to rule out retained products. Both of these imaging studies were completely normal. The patient continued to feel well with minimal cramping, bleeding, or pain. Her back pain was slowly improving. The patient's

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last temperature spike was on June 14 at 03:00 PM, at which point her temperature was 100.6 F. Again her other vital signs remained stable. Given the general downward trend of her temperatures, it was deemed that she was probably being treated for an endometritis as well as her urinary tract infection.

Her physical examination was quite benign. She was diuresing well. The patient had plans to attend the funeral of her two babies on Saturday morning in Virginia. Given her stable clinical status and improving picture, the patient was deemed stable for discharge.

SUMMARY: In summary, this is an 18 -year-old gravida 1, now para 1, 0, 0, 0 (2), status post vaginal delivery of twins at 23 weeks with fetal demise on delivery. It is believed that she had an inadequately treated E coli infection which proceeded to urosepsis which caused her to go into preterm labor and deliver at 23 weeks. There are no signs that the patient ever demonstrated any hemolytic picture. It is very unlikely that the patient had pregnancy induced hypertension with HELLP syndrome, given this information. Her urosepsis could certainly account for her laboratory abnormalities and clinical picture. She has responded appropriately to therapy and appears well at this time.

There is a small consideration that given a delivery at 23 weeks, the patient may have had cervical incompetence and likely should be followed with cervical lengths in subsequent pregnancies to insure that this is not an issue for her and will not be an issue in the future. However, she obviously warrants close monitoring of her cervical length during her next pregnancy. It should also be noted that throughout her stay the patient was seen by social workers and pastors in the hospital and was offered many supports during her stay. Obviously this is a tragic experience for her and her family and she has coped well thus far, and expressed appropriate mourning. Autopsy results are pending on her two babies. The placenta was also sent to Pathology and that report is pending. The patient will follow up in Virginia with her mother's obstetrician/gynecologist and with Dr. Wong in Massachusetts in two weeks.

DISCHARGE CONDITION: Good.

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DISCHARGE STATUS: To home in Virginia.

DISCHARGE MEDICATIONS: Ciprofloxacin 500 mg bid for fourteen days, clindamycin 300 mg po four times a day, Niferex 150 mg po twice a day, Motrin 600 mg po four times a day, quantity 30, Percocet 5/325 one to two q three to four hours, quantity 15.

DISCHARGE DIAGNOSES:
1. Probable urosepsis, precipitating preterm delivery at 23 weeks of twins.
2. Rule out cervical incompetence in subsequent pregnancies.

BRUCE F. COHEN, M.D. 16-359

Dictated By: VIRGINIA SIMMONS, M.D.

MEDQUIST36

D: 06/15/2001 09:11
T: 06/15/2001 10:02
JOB#: 00532
Signed electronically by: DR. BRUCE F. COHEN
on: WED JUN 20,2001 9:45 AM

COMMONWEALTH OF MASSACHUSETTS

ESSEX, SS. ESSEX SUPERIOR COURT
CIVIL ACTION NO: ESCV2002-01561

SARAH BORGQUIST as next best friend of NATHANIEL and ASHER BORGQUIST, SARAH BORGQUIST AND JOHN BORGQUIST, individually,
Plaintiffs,

v.

STACY L. VEITCH, M.D., and DEBORAH A. BRADLEY, M.D.
Defendants.

DEFENDANT, STACY L. VEITCH, M.D.'S SUPPLEMENTAL ANSWERS TO PLAINTIFF, SARAH BORGQUIST'S INTERROGATORIES

INTERROGATORY NO. 9

State the name and present address of each such person whom the Defendant expects may be called by the Defendant as an expert witness at the trail of this action, and as to each such expert, please provide:

a. his/her qualifications with particular reference to the issues about which such person may be called to testify at the trial of this action;

b. the subject matter on which each expert may be expected to testify;

c. the substance of the facts and opinions to which each such expert may be expected to testify;

d. the grounds for the opinions of each such expert.

ANSWER NO. 9

I have been informed by my attorneys that expert witnesses have not yet been selected for trial. This answer will be supplemented by my counsel prior to trial pursuant to Mass. R. Civ. P. 26(e).

SUPPLEMENTAL ANSWER NO. 9

Thomas F. Halpin, M.D.
Professor of Obstetrics and Gynecology
University of Massachusetts Medical School

Dr. Halpin is a board certified obstetrician/gynecologist. It is anticipated that Dr. Halpin will testify that Dr. Veitch's care and treatment of the plaintiff, Sarah Borgquist, ("plaintiff") during her pregnancy with twins complied with the applicable standards of care for the average qualified OB/GYN at the time and under the circumstances presented, and did not cause or contribute to any injury to the plaintiff or the twins. It is anticipated that Dr. Halpin will testify generally regarding the assessment, diagnosis, classification, and treatment of twin pregnancies, and discuss the characteristics of this condition, both generally and specifically with respect to this patient. It is expected Dr. Halpin will testify specifically regarding the patient's medical history and presentation, and the significance of same to her medical course and outcome. Dr. Halpin is further expected to testify regarding his training and experience in order to establish his familiarity with the issues which apply to the facts and allegations of this case.

It is anticipated that Dr. Halpin will testify regarding the care and treatment the plaintiff received from Dr. Veitch, the course of her pregnancy, and will testify that Dr. Veitch met the standard of care in all respects and that nothing she did or failed to do caused any harm to the plaintiff or the twins.

It is anticipated that Dr. Halpin will testify specifically with respect to the treatment of the plaintiff during her pregnancy. Dr. Halpin will testify that Dr. Veitch first met the plaintiff at her prenatal visit on 5/25/01. At that time she ascertained the patient's medical history including "history of 2 UTIs." Dr. Veitch also performed a physical exam, including routine prenatal labs/cultures/and Pap test. It was her understanding that the plaintiff was a patient at the NorthShore Birth Center and had sought and received her prenatal care up to that point from the midwives of the Center. When the midwives determined there was a twin gestation, the plaintiff was informed that she would need co-management with a physician, and as a result it was arranged that she would see Dr. Veitch for further prenatal care. After the exam, Dr. Veitch met with the plaintiff and her husband to explain how the practice provides prenatal and obstetric care to patients, to review general information regarding prenatal care in twin pregnancies, and to review her recommendations with regard to additional ultrasounds. She also discussed delivery options, including whether the patient should plan to deliver at Beverly Hospital rather than the Birth Center because this was a twin pregnancy. After her discussion with the plaintiff, an ultrasound was scheduled by my nurse to take place at Addison Gilbert Hospital on 6/5/01 to complete the fetal surveys, because the patient had completed only one ultrasound at around 15 weeks and additional imaging was appropriate at that time.

Upon review of the patient's routine lab results on 6/4/01, it was determined that the plaintiff was anemic and had a urine culture positive for infection. The patient was called that day and reported that she was asymptomatic. She was advised ~~her~~ to start on an antibiotic for 7 days to treat the urine infection despite the absence of symptoms, and my nurse, Sue Holcomb, telephoned the patient's pharmacy to order my prescription for Amoxicillin 500 mg TID for 7 days. It was also recommended to the patient that she start on Iron supplements once a day (for the anemia) and we recommended Vitron C as an over the counter supplement.

On 6/5/01, Dr. Veitch received a call from the ultrasound technician at Addison Gilbert Hospital reporting that the plaintiff had vomited twice during the ultrasound and she was not feeling well. The technician mentioned that because of the green vomit she specifically evaluated the gallbladder by ultrasound and it appeared normal without any obvious stones. Dr. Veitch requested that the ultrasound technician send the plaintiff to medical daycare at Beverly Hospital for IV hydration secondary to the vomiting. Dr. Veitch went to see the plaintiff on the medical daycare unit.

When she arrived, the plaintiff was receiving intravenous fluids and she stated that she felt a little better. She told Dr. Veitch that she had not felt well all day, and pointed to her upper abdomen and right shoulder area while describing her discomfort. The plaintiff said that she thought her chest/shoulder area was tender due to the vomiting she had just done. The plaintiff denied any uterine cramps or back ache. Dr. Veitch examined the plaintiff, specifically including palpation of her abdomen and uterus. She was mildly tender in the epigastric area and the uterus was soft and non-tender; the right side of her rib cage was tender, as well as part of her chest and around her shoulder blade. Dr. Veitch's leading differential diagnosis at that time was gastroenteritis with resulting muscular pain around the rib cage from vomiting. Dr. Veitch gave her one dose of an antiemetic, Zofran, and instructed the plaintiff and the nurse that once the nausea settled down we would have to see if the plaintiff could tolerate oral fluids before she could go home. The nurse's notes indicated "tolerating PO fluids fairly well" and she was discharged on Tylenol The patient was instructed to call Dr. Veitch's office if the nausea and vomiting continued or resumed, or if her temperature stayed elevated for more than 24 hours. Dr. Veitch's office had systems in place for receiving and routing patient calls on a 24 hour basis.

The plaintiff next called the office 2 days later, on 6/7/01, and reported that she was drinking water but not eating much. The plaintiff spoke to the call nurse who reported this information to Dr. Veitch. She was told to drink Gatorade and to call back if the vomiting continued. The patient did not call the office at anytime during the following day.

On Friday 6/8/01, Dr. Veitch spoke with the plaintiff to see how she was doing and was informed that the plaintiff was still nauseated and not drinking much. The plaintiff was asked her to come in for another course of IV hydration. After Dr. Veitch spoke with the plaintiff's husband, the plaintiff came in and received the IV hydration that evening.

Contrary to the plaintiff's expert opinion, Dr. Halpin is expected to testify that Dr. Veitch met the standard of care in the treatment of the plaintiff and her pregnancy. When the plaintiff presented with the first manifestation of her illness on June 5th with nausea and vomiting and back pain, she was promptly evaluated at the Beverly Hospital by Dr. Veitch. Following her examination, Dr. Veitch felt that her persistent vomiting, her temperature of 100.5 and her dehydration was consistent with gastro-enteritis and appropriately treated her with intravenous hydration and anti-emetics. Her back pain was intra-scapular and not costovertebral ("CVA") pain. The patient responded to the intravenous hydration and was taking fluids by mouth when discharged but was instructed to contact Dr. Veitch if her temperature remained elevated or if she had continued or increased nausea or vomiting, fever or chills.

Twenty-four hours later on Thursday, June 7th in a telephone call to Dr. Veitch's office, the plaintiff's only concern was the nutritional status of the fetuses because she was drinking well and staying hydrated but was not eating well. It was entirely appropriate for Dr. Veitch's office nurse to reassure her that the major short-term goal was to remain adequately hydrated.

On Friday, June 8th, it would appear that it was actually Dr. Veitch's initiative in contacting the plaintiff and her husband that resulted in her returning to the Beverly Hospital for a repeat administration of IV fluids. The nurse's interval history recorded on her admission at 3 p.m. on Friday, June 8th, re-emphasized that she had been having vomiting and diarrhea for three days and had a two to three pound weight loss consistent with the working diagnosis of gastro-enteritis. In view of the patient's continuing symptoms, it was entirely appropriate to rehydrate her to carry her through this illness.

Dr. Veitch did not treat or speak with the patient during her readmission to Beverly Hospital on the weekend of June 9th and June 10th. Dr. Bradley treated the plaintiff as the on-call physician. During her admission of June 9th, the plaintiff informed the nurse that had not been taking the Amoxicillin. The plaintiff stated in her Answers to Interrogatories that she had not kept down the pills except for the day before (Friday) but stated in her deposition that she had kept them down on Wednesday, Thursday and Friday mornings for a at least an hour before vomiting. The plaintiff told Dr. Bradley that "Dr. Veitch had given her a prescription for antibiotics but she had not taken any."

There was no reason, except in retrospect, to suspect that she had a urinary tract infection. Asymptomatic bacteruria as detected in this patient on May 25th is common in pregnancy, and this patient did not have signs of pyelonephritis such as dysuria, fever, and CVA tenderness to suggest that any part of her illness was secondary to urinary tract infection. The asymptomatic bacteruria was simply a side light and whether or not it was being adequately treated during this episode of gastro-enteritis was unimportant since treatment could await the resolution of the gastro-enteritis.

Even when admitted to the Beth Israel Deaconess Medical Center with what was, in retrospect, septic shock secondary to right pyelonephritis, the resident's admission differential diagnosis was "preeclampsia versus likely HELLP syndrome" and also "urinary tract infection." The chief of perinatalogy, Dr. Bruce Cohen, after examining the patient and reviewing the additional laboratory work that had been done at Beth Israel, as well as her course in the Beth Israel Hospital, was uncertain as to whether she had urosepsis or acute fatty liver of pregnancy or HELLP syndrome. Finally, following delivery, it became clear that the working diagnosis was urosepsis, accounting for the patient's elevated liver function tests, borderline low blood pressure and lack of hemolysis. Her subsequent hospital course was typical of a patient with gram negative sepsis. Because of this atypical presentation and the absence of dysuria, fever and flank pain, the cardinal symptoms of pyelonephritis, it was not possible to make the diagnosis or in retrospect, even be certain when she transited from gastro-enteritis to pyelonephritis.

Autopsy findings on the infants simply showed extreme prematurity. Both infants were described as normally developed and the pathologist states, "To summarize this live born twin, died of extreme prematurity due to preterm labor. Although it was not possible to identify a specific cause for the onset of preterm labor in this case, there were several factors that may have contributed to its onset. Multiple pregnancies is well known to be associated with preterm delivery at least in part of increasing the likelihood of cervical incompetence. The presence of an untreated maternal urinary tract infection can serve as a predisposing factor to the development of chorioamnionitis which is one important etiologic factor in preterm labor although there was no evidence of chorioamnionitis at autopsy."

Dr. Halpin will base his testimony on his education, training and experience, the relevant medical literature, his familiarity with the medical standards of care, his review of the medical records, radiology, and other medical material of the plaintiff, his review of discovery materials in this case including pleadings, deposition transcripts and documents exchanged by the parties, and on his review of the plaintiffs' Offer of Proof submitted to the Tribunal in this case (including review of plaintiffs' expert opinions contained therein). Dr. Halpin will further testify in response to and in rebuttal to the testimony proffered by plaintiffs' expert(s) at trial, and he will state his opinions with reasonable medical certainty.

SIGNED UNDER THE PAINS AND PENALTIES OF PERJURY ON THIS 17 DAY OF Nov., 2004.

Stacey L. Veitch, M.D.

As to objections:

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